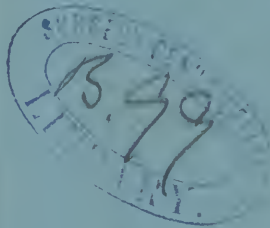


WING (C. E.)

WITH THE WRITER'S COMPLIMENTS.

A CASE OF
COMPLETE INVERSION OF THE UTERUS,
WITH REMARKS UPON
THE MODERN TREATMENT OF CHRONIC INVERSION.

CLIFTON E. WING, M.D., Boston.



A CASE OF COMPLETE INVERSION OF THE UTERUS.*

REPOSITION 14 MONTHS AFTER THE CONFINEMENT BY MEANS OF CONTINUED MODERATE PRESSURE, WITHOUT THE AID OF ANÆSTHESIA. REMARKS UPON THE MODERN TREATMENT OF CHRONIC INVERSION.

By CLIFTON E. WING, M. D., BOSTON.

THE history of the case, which was seen in consultation with Dr. J. R. Bronson, of Attleboro', is as follows:—

The patient was a native of Massachusetts, 36 years old. Menstruation, which began when she was 13, was regular until her present trouble. Usual time of flow 5 days. Amount normal. No dysmenorrhœa. No leucorrhœa. She was first married when 19, and to her second husband when 33. Had four children by her first husband, all her confinements passing off well and presenting nothing noteworthy. Never any miscarriages. Was hearty and able to be about her household duties up to the time of her fifth confinement (14 months before seen), which began with a discharge of waters. She was attended by an "irregular." Was in labor 40 hours from the time the waters broke, when she was delivered with instruments, a second physician being in consultation. Flowed "awfully" at the time. I did not learn that there was any trouble in the delivery of the afterbirth. She had a slight bloody discharge for two weeks, but "nothing more than natural." Stayed in bed 5 weeks. During this time, i. e. until she was up on her feet, her urine dribbled away continuously, and she states that she was very much bloated; her "stomach was very large." Her medical attendant did not use a catheter, nor propose it. When she got up (at the expiration of the 5 weeks), she found that after being on her feet a short time uterine flowing would set in, ceasing when she kept her bed a few days, only to reappear when she again left it. Two months after confinement she had a severe hæmorrhage, flowing "nearly to death." Has flowed three-fourths of the time since. She states that the physician when called told her each time that the flowing was probably the return of menstruation. Finally, as he did not come when sent for, Dr. Bronson was called in—diagnosed an inverted uterus, and asked me to see the case with him.

The patient, a large, rather heavy woman, was found dressed and lying upon a lounge. She was exceedingly anæmic, as much so as any patient with chlorosis. Pulse feeble, under the excitement of the visit running up to over 120 in the minute. Appetite good. Bowels regulated by medicine. Has not flowed for the past few days. Has no special pain, but complains of great weakness and complete exhaustion on attempting to do the least thing.

On introducing with care a Sims speculum, the vagina was found filled with a pretty firm, red, fleshy tumor, having a tendency to bleed, the blood oozing from the surface in drops wherever it was touched. As far as could be felt, its base was large and not pediculated, and there seemed but little doubt as to the character of the case. On account of the free bleeding, the examination was carried no further at the time, but the patient was advised to come to Boston for treatment, which she did some weeks later.

When she arrived in the city, Feb. 13, 1879, she was flowing freely, and stated that from the fact that she lost much blood just four weeks before, she was disposed to think it might be her time of menses.

She was sent to bed, the foot of the bed to be elevated as much as she could bear, and after four days in this position, the flowing having meantime ceased,

* A paper read before the Suffolk Medical Society, Nov. 29, 1879.

was put upon full doses of Tr. Ferri Chlor., and ordered copious hot-water vaginal injections several times daily. These were continued 5 days, when on second examination, the tumor was found much less tender, less congested, in fact now rather pale and showing very little tendency to bleed when handled. That the tumor was the inverted uterus was sufficiently plain without resorting to the various methods of verifying the diagnosis, such as rectal touch, sound in the bladder, etc. etc., which are laid down in the books. These would have caused pain unless an anæsthetic had been used, and were not adjudged necessary in view of the method of treatment I was about to employ—a method which in itself is an excellent means of diagnosis. The inversion was complete; in fact, anteriorly, it even involved the upper part of the vagina.

I had previously determined to treat the case by continued pressure applied to the inverted fundus. Thinking I might find the “stem and cup” figured by Barnes, or some stem supporter which I could make use of, I applied at the various instrument dealers, but did not succeed in finding anything which suited my purpose, and finally employed a common old-fashioned wooden stethoscope, as a stem to go into the vagina and press upon the uterus, tying strong sheet rubber over the open larger end (the end applied to the chest in auscultation), and thus making a soft cushion at that end. The other end projected from the vulva. Pressure was obtained by using two pieces of common elastic tubing passed between the thighs, where they were tied by the middle to the outside end of the stethoscope, the ends being drawn tight and attached in front and behind to a waist belt. I found that by regulating the tension of these elastic bands, not only could the amount of pressure be easily controlled, but the direction of the force be perfectly managed. In these respects nothing better could be wished for; but under the pressure the sheet rubber which I had stretched across the open end of the stethoscope became so much depressed that the sharp rim of the latter was going to cut into the uterine tissue. I therefore substituted for the stethoscope a piece of wood of much the same shape (for after the practical trial I did not see how this could be improved), but solid, the upper end (i. e. the end applied to the tumor) being a little concave that it might not readily slip to one side, and for the same reason being made large enough to fill the calibre of the vagina. The evening of the second day there was evidently some gain. A cavity of the neck now existed all around the inverted fundus, and it was of sufficient depth to receive the latter enough to prevent it from slipping about in the vagina, i. e. it held it so well in position that pressure must act in the right direction. Therefore as the large end of the first repositior was rather uncomfortable for the patient from distending somewhat the vagina, I made use of a second one, the upper end of which was of less diameter and could be employed to follow the fundus up inside the cervix. The upper part of this second one was also made of the same diameter for several inches from the upper end, that the cervix having been passed the latter should not contract and cause trouble in the removal of the instrument, as has several times been the case where “a cup and stem” have been used. The evening of the third day the patient felt a little restless. The pulse, which was at 96 when the process began, ran up to 108. She complained of being tired. To insure her a quiet night (she had had good nights so far, sleeping well), I gave her a $\frac{1}{4}$ gr. dose of morphine, which was all the medicine, with the exception of the Iron tonic, which she received. She slept well, but was waked up in the middle of the night by feeling “something jump inside,” as she expressed it, and she immediately found that the pressure from the apparatus had ceased.

When seen in the morning, she was feeling nicely; had no pain, and her pulse was again 96. On examination, I found the uterus replaced, and the end of the instrument extending up into its cavity.

I had not anticipated so speedy a result, and not being supplied with my proper instruments, in order to assure myself before leaving the patient that there was no partial inversion still left, I improvised a bougie by cutting off the end of a broom handle and smoothing it with sand-paper which happened to be at hand. This I passed without difficulty into the canal of the uterus, to the depth of $3\frac{1}{4}$ inches, and thus proved that the reposition was complete.

The patient was kept in bed for a few days, and the hot water injections continued. When she got up, five days after the return of the organ to its place, she said that she felt perfectly well. A dragging sensation in the left side, from which she had suffered much, was gone, and she was able to stand and walk in a perfectly erect position, which she had not done since sick. She returned home a week later, and menstruation, which occurred soon after her return, was normal in every way. She regained her strength rapidly, and Dr. Bronson has recently informed me that she continues well and is again pregnant (at about the fifth month).

During the treatment she took no anæsthetic, and no anodyne except the $\frac{1}{4}$ gr. of morphine referred to; and according to her own statement, suffered no more pain than she had frequently had in the same length of time during her illness. She ate heartily and took her Iron tonic regularly.

There was a free discharge of mucus from the inverted mucous membrane, but scarce a trace of suppuration. The fundus bore the pressure without damage. Experience has shown that the inverted organ is much more tolerant of continued pressure than would naturally be supposed. The instrument was removed and cleansed daily, and before it was replaced the parts thoroughly washed out with a disinfectant solution. This diminished the risks of septicæmia, and also afforded an opportunity of watching the condition of the parts where the instrument pressed.

The effect of hot water injection, employed after the method introduced by Dr. Emmet, in reducing the congestion and sensibility of the parts, was very satisfactory.

The value of *continued gentle pressure* in the treatment of *inversio uteri* seems to have been but little appreciated by the profession at large, although its merits have been sufficiently proven by the successful cases which have been from time to time reported, particularly in Great Britain*.

The main difficulty in the return of the uterus to its proper position lies in the fact that that portion of the uterus which is not inverted—or, in case of complete inversion, the cervix—contracts behind the inverted portion, and must be dilated in one way or another before the inversion can be returned.

It is a well known physiological fact that the strongest muscle, which would be powerful enough to resist great force applied for a comparatively short time, can yet be completely overcome and thoroughly stretched by the continued application of very little force. Now the whole uterus, and therefore, of course, that portion of it which in the given cases constitutes the impediment to reposition, is to all intents and purposes a muscle, a muscle strong enough to successfully resist in many cases the force applied in taxis—a force which can be applied but a little while at a time, and which moreover is often not very great since the hand of the operator works at a great disadvantage and soon tires—but which cannot withstand the action of *long continued* pressure upon the fundus, even when the amount of pressure is but slight.

There are two reasons which may partly explain why continued pressure has not been more highly esteemed in these cases. In the

* In the Boston Medical and Surgical Journal of Jan. 13, 1876, is an interesting and instructive report by Dr. Geo. G. Tarbell, of this city, of a case which occurred in his service at the Massachusetts General Hospital. Continued gentle pressure proved successful after other means had failed. This was one of the earliest cases treated by this method. Dr. T. had a second successful case not long afterward.

first place, it has probably been pretty generally supposed that the inverted organ would not tolerate pressure upon its mucous membrane for any length of time. This idea experience has proved to be fallacious, although we may of course expect that certain cases may be the exceptions which prove the rule. Secondly—where continued pressure has been attempted, stupidly enough, in most cases an elastic bag introduced into the vagina, and then distended with water or air, has been employed. The bag being in contact with the vaginal walls over a much larger surface than it is in contact with the inverted uterus, in accordance with well known laws much more of its power has been expended in dilating the vagina and stretching the surrounding tissues than in elevating the uterine body. This very distention of the vagina, if the bag be forcibly distended, of itself often causes more pain than the patient can bear, as is well known by many who have employed such bags as vaginal tampons in cases of uterine hæmorrhage. Where success has followed the use of the vaginal bag, in these cases, either the vagina and surrounding tissues have been remarkably tolerant of distending force, or, as has undoubtedly been the usual case, the uterus has been replaced by remarkably little continued pressure exerted upon it. It is evident that a full and fair trial of continued pressure cannot be made in this way. Although the inefficiency of the elastic vaginal bag has been repeatedly pointed out and written about, it is still resorted to in such cases; and where it has been found on trial that the patient could not bear its continued use, or that it did not replace the uterus, the operators—often those who might be expected to know better—have generally concluded that the uterus was too sensitive for continued pressure treatment, or that pressure faithfully tried had proved a failure. Often, too, the pelvic pains and tenderness, caused simply by the distension, have been mistaken for the symptoms of pelvic peritonitis.

[There is a noticeable want of clearness on the part of certain writers as to what constitutes "elastic pressure" in these cases. Some of the text books, in treating of the methods of reduction, use the term "elastic pressure" in a somewhat peculiar and, it would seem, in an improperly restricted sense. For example: Dr. T. G. Thomas, in his work on *The Diseases of Women*, distinguishes the method of reposition by "pressure by vaginal stem and cup or bulb" from those by "elastic pressure combined with taxis" and "elastic pressure alone." Certainly the first method (by vaginal stem etc.), as practised by Barnes, Tait, Aveling and others, and employed in this case, stretched elastic bands furnishing the power, is a most practical way of employing elastic pressure; whereas the elastic vaginal bag, which the author apparently means when he says "elastic pressure," is, as already stated, a decidedly inefficient agent. Dr. Barnes, also, often uses the expression "elastic pressure," when he means the vaginal bag. It is a loose use of terms likely to confuse the reader.]

It is rather strange that in one of the latest works upon Gynæcology—the excellent book of Dr. Emmett, published in 1879—the author,

in treating of inversion of the uterus, while he enters at length into the various methods of applying taxis, including his own, makes no mention of the use of continued pressure. Dr. Emmet describes and illustrates by diagram a method which he has devised and practised, when he has partially replaced an inverted uterus by taxis, carrying the fundus above the external os, but has been unable at the one sitting to complete the reposition. In such cases, he has *temporarily closed in the cervix* below the now partially replaced fundus, by means of wire sutures. He writes, p. 431, "When, from any cause, the attempt at reduction has to be abandoned for the time, an extensive amount of dilatation is thus preserved until the condition of the patient will admit of another effort in her behalf. On a moment's reflection it will be evident that a persistent dilating force is at once established, without taxing the strength of the patient, which may of itself, in some cases, complete the reduction unaided. By stretching the cervix over the fundus, an unyielding mass within the uterine canal, a force is exerted on the outside of the organ to roll out the parts above, while at the same time an upward action is at once established below the inversion by forcing the fundus as a wedge in the direction offering the least resistance. Then any action of either the longitudinal or circular fibres of the uterus, or both together, will aid in the reduction."

It is true that in certain cases, after the cervix has been thus temporarily closed, uterine contractions have completed the reduction. The case reported in the Boston Medical and Surgical Journal of 1879, p. 251, by Dr. E. H. Stevens, of Cambridge, is an example. The patient had pains resembling labor pains, and afterward the uterus was found in its normal position; but we cannot in all cases count upon uterine action lending such efficient aid.

Dr. Emmet further writes, "The power exerted" (i. e. when the cervix is closed by sutures), "is exactly that brought to bear on the uterus when the vagina has been fully distended by an air bag."

One cannot but judge that the power brought to bear upon the uterus in closing the cervix by this method, must be less than that exerted upon that organ by the vaginal bag even, for otherwise the sutures would inevitably cut out in a very short time. While in certain exceptional cases this procedure of temporarily closing the cervix may prove exceedingly valuable, I believe that proper direct pressure upon the fundus will ordinarily prove much more efficient and reliable, and it is certainly a simple method of treatment. The wedge action exercised by the inverted portion as it is pressed upward, spoken of by Dr. Emmet, will by this means be fully developed, while the pressure will, as Barnes says, "tend to press out the blood and serum from the body of the uterus, diminishing its bulk and arresting hæmorrhage." At the same time, the longitudinally stretched vaginal walls, in resisting the elevation of the uterus as a whole, will, through their attachment to the cervix uteri, exercise a really efficient force, tending to open the "circle of resistance." I suspect, that if it is tried in the future in such cases, the second attempt at taxis

will rarely be necessary, as the operator will probably be agreeably surprised to find, on his next examination, that the womb has resumed its proper position. Indeed, if the continued pressure method is tried in the first place, there will not often be any necessity for taxis first or last.

The procedure of *permanently closing in the cervix* below a partially reduced inversion, [leaving of course an opening for the escape of menstrual and other secretions,] as first proposed and practised by Dr. Emmet, may prove valuable where the full reposition is impossible, but that an inversion is irreducible is a condition he is "not willing to acknowledge except under very unusual circumstances." Dr. Emmet gives the notes of a case where he thus closed in the cervix, when, as was thought, adhesions prevented full reposition by taxis. As he gives the notes of another case where adhesions, which at first prevented reposition, gave way after temporarily closing the cervix by silver wires, as above described, it is interesting to think whether here proper continued pressure upon the fundus, with its much greater efficacy, might not have safely completed the reposition. Dr. Barnes calls attention to the fact that oftentimes the autopsy has failed to reveal the adhesions which were diagnosed during the life of the patient, and that adhesions are much rarer in these cases than would naturally be supposed.

The *method of treatment by taxis* is eminently proper in acute cases of inversion—cases seen soon after the accident has happened, and before the womb has firmly contracted. Hæmorrhage may be so severe, and other symptoms may be so urgent, and moreover reposition with the hand is often so easy at this time, the uterine fibres being relaxed, that it is the proper method to try; but in chronic cases I believe the treatment by continued moderate pressure is much more rational and better for the patient, although success, perhaps, is not accompanied by such *éclat*.

In the published "Transactions of the American International Congress" of 1876, is an article upon "Chronic Inversion of the Uterus," by Prof. J. P. White, of Buffalo, who has done as much as any one to demonstrate the feasibility of reduction in such cases, and operated successfully upon very many cases, one of even twenty-two years' standing. He writes, p. 876—"The uterus becomes as small and inflexible immediately upon the conclusion of involution, which, according to the best authorities, occurs within twelve or at most sixteen weeks after delivery, as at any subsequent period before the menopause. Reduction, therefore, at the expiration of twenty years is not more difficult than after the same number of weeks, as far as the manipulation of the organ itself is concerned. There is, however, an intervening period between the commencement and the conclusion of the process of involution, when the organ must in my opinion be handled with more care. While undergoing this change, the uterus does not possess the firmness and elasticity of the unimpregnated organ, nor the muscular flexibility and toughness of that at full period of gestation. Whilst in this transition state undergoing the process of

fatty degeneration, it is, I apprehend, far more brittle and liable to rupture than after the change is fully accomplished It will probably be found safer, in view of this friable condition of the tissues after the commencement of involution, to wait for the completion of this process, notwithstanding the increased difficulties of the operation occasioned by such delay."

The force of this last sentence depends very much upon what method is to be employed in the reduction. Where taxis is employed, no doubt it is true, and even Dupaul, employing forcible reduction at this stage, once penetrated a uterus with a wooden repositor; but where only moderate continued pressure, applied through a suitable vaginal stem and properly regulated, is used, I should not anticipate trouble even during the stage of involution. Still, unless urgent symptoms were present, interference might be postponed until later.

The method employed by Dr. White, of *taxis combined with the use of his repositor* (a vaginal stem with a spiral spring at its external end, against which the operator presses his body and thus keeps up pressure upon the fundus during the manipulations), although a step in the right direction, and less likely to do harm than where the force of the fingers alone is relied upon, is nevertheless a very different procedure from the "continued moderate pressure" method. Dr. White thinks it is incorrect for Dr. Barnes to call his method "a forcible reduction." He points out the fact that gynæcologists of the present day do not hesitate to dilate the uterine canal when necessary, and asks, "why may we not pull open the neck by means of the vagina, in the same gentle manner as we could press it open when in a normal position?" and says, "the vagina pulls open the os with less liability to laceration than the pressure of the tent, the india rubber bag, or any other mechanical means can do."

This may be perfectly true, but gynæcologists of the present day, in using tents to dilate a firm non-pregnant cervix, do not expect full dilatation in the short time—at most a very few hours—in which Dr. White at one sitting completes his operation. Indeed no better example of the efficacy of "long continued moderate pressure" could be desired, than is afforded by the action of a sponge-tent.

I think Dr. Barnes is in a measure right when he speaks of the method of "forcible reduction" as having been confounded with that of "gradual reduction by sustained pressure." He writes further—"The principles of the two procedures are totally opposite. One tries to overcome resistance by sheer force applied rapidly, the other by wearing out resistance by gentle pressure long sustained. The first is replete with danger, the second almost absolutely safe."

While at the hands of one as experienced and able as its inventor, White's method may be quite safe, when essayed by those less able, I can easily conceive that harm might be done. It moreover necessitates the use of anæsthesia, as do all methods of taxis; is attended, as far as the patient is concerned, with all the horrors of a surgical operation; requires the presence of assistants, and is often accompanied with more or less shock, several patients having exhibited tendency to collapse

during its performance—whereas the “continued moderate pressure” method requires scarce any skill in its application, does not ordinarily necessitate anæsthesia or the presence of assistants, and is not terrifying to the patient; in fact, is so simple a procedure that it hardly deserves to be classed among surgical operations.*

An interesting case is reported by Dr. J. Matthew Duncan, in the *St. Bartholomew's Reports* for 1878 (vol. xiv.), in which he treated complete inversion by continued pressure, after removing a sloughing fibroid which was attached to the inverted organ. On the first attempt continued pressure had to be abandoned for the time being, on account of “abdominal pain, vomiting and general distress” which it caused. On removal of the apparatus employed, the body of the uterus was found “pressed up within the cervix.” (Here was an instance where Emmet's method of temporarily closing the cervix might have proved advantageous.) A week later, a second attempt failed, from the instrument slipping off the fundus. A week after this, on June 4th—two weeks after the first attempt—continued pressure was applied for the third time. At the end of seventy-four hours “the patient felt a sudden and severe pain in the hypogastrium,” and said she “felt the instrument slip into her body.” The pain was worse after this. She felt faint, and was sick twice. She was given brandy and morphine. *Two days after this*, “the instrument was with some difficulty removed from the uterus in whose cervix it was incarcerated.”—July 2d, she left the hospital, but three weeks afterward she died. There was no autopsy, and no satisfactory account of the cause of death could be obtained. Still something may perhaps be learned from the report of the case.

Another time, when a first attempt at continued pressure had to be abandoned on account of such severe symptoms as were here caused, namely, “abdominal pain, vomiting and general distress,” it might be better to wait longer before renewing the attempt at reduction, in the meantime using the hot vaginal douches and other measures calculated to remove tenderness and lessen the sensibility of the parts.†

Again, persons as anæmic as patients with inversion usually are, are notoriously liable to septicæmia from slight causes. Now in the case reported by Dr. Duncan, the instrument, [judging from the description very similar to the one employed in the present case,] was left in position two days after the patient had felt the parts slip back, for what reason it is difficult to conceive, and then found “incarcerated in the cervix” and “removed with difficulty.” During this length of time the uterus could not have been washed out, and whether there were any systematic and efficient cleansing of the parts during the

* Dr. White, in the course of his articles, after referring to Barnes's criticism, says that his repositior *may be used*, to apply continued pressure where this is deemed desirable—but this is not properly “White's method.” Indeed he states, that in every case he has operated, he has replaced the organ at one sitting.

† Dr. Watts, of New York, has reported in the *American Journal of Obstetrics*, 1879, p. 16, a case where reposition was successfully accomplished after three months use of the hot vaginal douche, several attempts before this having failed to replace the organ.

treatment does not appear in the report. During two days, therefore, if not longer, the patient must have been exposed to the risks of septic absorption. Further, the report states that, after removal of the instrument, "a purulent discharge from the uterus" was abundant at first, and very slight when she left the hospital; that the evening of the day the instrument was removed (the 9th inst.) the "patient sweated profusely"; that for several days "she had much bilious disorder and occasional sickness, and vomiting"; that on the 18th inst. she "still had attacks of sickness," and that during her fatal illness after leaving the hospital, she "suffered from anorexia and constant vomiting." From these data it seems not improbable that septicæmia may have had something to do with the fatal issue. The nausea and vomiting, noted in some other cases may possibly have been due in a measure to this same cause. Be that as it may, it will be well to employ in all cases frequent and thorough cleansings of the parts during the treatment, that this danger may be reduced to a minimum.

In the obstetrical Transactions for 1878, xx. p. 126., Dr. Aveling describes and figures a "repositor" of his own invention which possesses certain advantages. Appreciating the fact that the direction of the employed force is that of a straight line drawn from the external end of the repositor where the force is applied, to the other end which presses against the inverted organ, he has given his vaginal stem, which is made of metal, a double curve—the upper curve being that of the axis of the vagina, while a lower curve extends backward around the perineum and between the thighs. This latter being made of greater or less length as the case may require, the operator is enabled to direct his pressure more precisely than can be done where a straight stem is employed. In some cases this will prove of advantage, but probably in most cases the simple straight stem will suffice and can, as in our case, be improvised for the occasion.

Dr. Aveling, in the British Medical Journal of Sept. 6, 1879, gives several cases treated by continued moderate pressure with success, and after noticing the methods of treatment by incisions, sutures, dilatations, &c., expresses the enthusiastic opinion that "all these aids to reposition, whether they be harmless or dangerous, will henceforth be unnecessary."

The devices (double india-rubber bags, etc.) which have been invented to compress the inverted body and thus render it smaller and more easily replaced, are more ingenious than useful, and practically are of little value.

Dr. Barnes recommends that when a vaginal stem and elastic pressure are used, which was the method employed in our case, "counter-pressure should be exerted by pads applied to the abdomen supported by a firm binder."

I believe this counter pressure to be quite unnecessary. Indeed it would, by keeping the whole uterus low down in the pelvis, tend to prevent the longitudinal stretching of the vaginal walls, by which their action in pulling upon the cervix uteri is brought about.

He also writes, "once a day, or every other day, the instrument may be removed, and under chloroform an attempt at reduction by taxis may be made"; and the advice has been followed in many of the cases.

I consider this employment of taxis thoroughly inadvisable unless special indications arise in the given case. It is unnecessary—must add both to the mental and physical suffering of the patient, and moreover robs the method of one of its greatest advantages, its simplicity.

It is rather remarkable, in view of what is now known of the subject, that the French writers still speak highly of *amputation of the inverted organ*. In an essay by M. Hue, published this year in the Bull. Société de Chirurgie de Paris, the author expresses the opinion that in cases of complete inversion the operator will be obliged "often if not always," to have recourse to amputation of the organ! The writer reports a case of amputation of an inverted uterus by the elastic legature, after *taxis and the vaginal bag* had been tried, and M. Chauvel in the same journal reports a similar case. M. Forget, at the meeting of the Society July 9th, 1879, in presenting the models of a case of complete inversion of the womb found in a patient who died in 1838, in the wards of Lisfranc, said he "did not hesitate to affirm that in a case of complete inversion of 15 months duration, reduction would be impossible," and that he would in such a case, if interference became necessary, remove the organ "by the use of the elastic ligature and cauterization with chloride of zinc, after the plan recommended by M. Valette."! Regarding amputation, Dr. Barnes writes—"It is a confession of impotency to solve the problem of reduction. It is the last resource, one to which I am fully convinced, we need hardly ever, if ever, be driven. Prof. White, whose wide experience with such cases gives weight to his words, thus expresses his opinion: "I am incredulous as to the necessity of ever resorting to amputation." We can only hope that it may soon become an operation of the past.

In the British Medical Journal of Sept. 6, 1879, Dr. Barnes reports a case where he amputated an inverted uterus with the ecraseur, having begun the operation under the impression that he was dealing with a polypus. The woman had passed the change of life (being 49 years of age), and had had a polypus removed some two years before. Dr. Barnes, in his remarks upon the case, distinguishes cases of chronic inversion met with in patients who have passed the climacteric, which cases he terms "senile chronic," from those chronic cases which occur before the menopause—holding that in the former cases, while amputation is less open to objection, reduction is much more difficult of execution.

It is well to remember that somewhat similar reasoning leads the French writers to prefer amputation to reduction in cases of common chronic inversion, and it would seem best to reserve amputation for those cases where attempts at reposition, made according to the best methods, have failed, and the need of interference is pressing; for,

as Dr. Barnes truly says, "It must be borne in mind that, especially in the senile chronic inversions, tolerance may be acquired, and thus render all operative interference unnecessary."

Dr. Thomas, of New York, in his text book on *The Diseases of Women*, while making a very cursory mention of "gradual reduction by repositior" in a paragraph of less than nine lines, devotes more than nine pages to a description of a plan of treatment suggested by Sir James Simpson, which he has twice carried out, namely: He has opened the abdominal cavity, thus getting at the inverted organ from the peritoneal side; has dilated rapidly with an instrument fashioned like a glove-stretcher the constriction which was the impediment to reposition, and then replaced by taxis by the vagina. The first patient upon whom the method was tried recovered; the second one died. The procedure has not met with much favor, and I am not aware of its having been resorted to by any one else. White speaks of it as "still more objectionable" than amputation. Barnes's opinion is that "a method which requires gastrotomy for its execution involves conditions of danger so great that even amputation seems preferable," and Emmet looks upon it as more dangerous than ovariectomy. A review of the two cases is rather interesting in this connection.

The first patient was a delicate woman, twenty-three years old, and the inversion was of twenty-three months' standing. Taxis had already been thoroughly tried ten different times, each time the patient being anæsthetized, and each time the effort being systematically followed by the use of the vaginal bag distended with air. Dr. Thomas, after giving the patient the warm vaginal douche and belladonna suppositories, tried taxis in various ways—four more times, varying the treatment by following up the attempts at taxis with the vaginal bag distended with water in place of air. He states that he would have resorted to Emmet's method of temporarily closing the cervix with sutures below the inversion, but the fundus was never got sufficiently high to admit of it. Having no success with taxis, he thought of passing "a delicate tenotome through the fundus, carrying it up through the cervical canal and incising its four sides so as to cut through the constriction existing there and due to fibres near the os internum." This idea was not carried out, and I think we may say it was fortunate, for as more or less of the Fallopian tubes and the broad ligaments are carried along with the inversion, there is no telling what might have been cut in the procedure. He next resorted to an operation which has been done in a few cases successfully. Drawing down the inverted organ, he made an incision at the point of constriction through the mucous membrane, and "extending down toward the subjacent peritoneum," in hopes that after being thus incised the constriction would yield to taxis; but the incision was immediately followed by severe bleeding, "upwards of a dozen" ligatures were used, but the vessel having retracted could not be tied. Finally, Dr. Nott, who was present, checked the flow by sewing the surfaces of the incision together. Some sloughing of

the mucous membrane followed. After the patient was in a fit state again, Dr. Thomas proceeded to open the abdomen and dilate the constriction after the method described above. On applying taxis after this had been done, the bleeding which had been so troublesome before began afresh. Seeing that he had no time to waste, he returned the organ rapidly, but in so doing forced his finger through the vagina, between the bladder and the uterus. The next day, bleeding, probably from the same source as before, was severe—blood flowing freely from the vagina, and also “through the vaginal rent into the peritoncum.” The patient’s pulse ran up to 160, and the symptoms were so serious that preparations for transfusion were made. However, the bleeding ceased on raising the foot of the bed, and using tannin in the vagina. The patient fortunately escaped peritonitis, and subsequently got well. This was the successful case.

The other case was one of eight months’ standing. “Ordinary means, elastic pressure and taxis,” had been “exhausted without avail.” From the restricted sense, previously referred to, in which the author uses the term “elastic pressure,” it is to be presumed that the “elastic pressure” which had been exhausted was again the “vaginal bag.” The operation was done, as in the first case, but without the complication of hæmorrhage, and without rupturing the vagina. At the end of 48 hours peritonitis developed, and the case ended fatally.

I would particularly ask attention to the fact, that Dr. Thomas writes regarding the first case that he “found no adhesion whatever to exist,” and that when he inserted his dilator and dilated the stricture, “the dilatation was exceedingly easy and rapid.” Of the second, the fatal case, he writes, “introducing one finger into the sac of the inverted uterus, I inserted the dilator, and in sixteen minutes withdrew it, and, with an ease which surprised us all, replaced the uterus.” Referring to the treatment this last patient had had before he saw her, and the previous attempts at reduction, he says that the last effort (at reduction) was a “very persistent one” which lasted for “TWO HOURS.” In our case it was not until the evening of the second day, when pressure had been continued MORE THAN 30 HOURS that any gain could be appreciated, yet the final result was all that could be wished for.

While it would be foolish to suppose that in every case where sustained moderate pressure is tried the result will be as easily successful as it proved in our case, or that any one method of treatment will invariably suffice, still on reviewing these two cases I cannot but think that we may with full justice exercise the Yankee prerogative, and *guess* that if the easy, simple, safe and, in view of physiological knowledge, common sense method of treatment by continued moderate pressure properly applied had been tried, these truly heroic operations, which by their boldness excited marked attention in medical circles both at home and abroad, would never have been performed.

